

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Roggeman, et al.
Title : Humidification of Hydrocarbon Mixtures for Use in Polymer Synthesis
Application No. : 10/799,565
Filed : March 11, 2004
Group Art Unit : 1709
Examiner : Merkling

REPLY BRIEF

Sir:

This Reply Brief is filed in response to the Examiner's Answer mailed January 27, 2009, Any fees due should be charged to Bridgestone Deposit Account 060925, ref: P00091US1B.

I. Status of Claims

Claims 17-42 are pending and are finally rejected. The rejections of each of these claims are now appealed. Claims 1-16 are cancelled.

II. Grounds of Rejection to be Reviewed on Appeal

Whether claims 17, 18, 20, 21, 26-29, and 34 are unpatentable under 35 U.S.C. § 102(b) as being anticipated by Okada (JP 05-171164). Whether claims 31, 36, and 40 are unpatentable under 35 U.S.C. § 102(b) as being anticipated by Holst (U.S. 5,650,128). Whether claim 19 is unpatentable under 35 U.S.C. § 103(a) as obvious over Okada in view of Smith, Jr. (U.S. 5,446,223). Whether claim 25 is unpatentable under 35 U.S.C. § 103(a) as obvious over Okada in view of Yoneda (U.S. 5,123,836). Whether claims 22-24, 31, and 32 are unpatentable under 35 U.S.C. § 103(a) as obvious over Okada in view of Holst. Whether claim 30 is unpatentable under 35 U.S.C. § 103(a) as obvious over Okada in view of Niwa (U.S. 4,705,654). Whether claims 33, 38, and 39 are unpatentable under 35 U.S.C. § 103(a) as obvious over Okada in view of Goode et al. (U.S. 6,111,03). Whether claim 35 is unpatentable under 35 U.S.C. § 103(a) as obvious over Okada in view of Goode et al. (U.S. 6,111,034). Whether claim 37 is unpatentable under 35 U.S.C. § 103(a) as obvious over Okada in view of Holst, and in further view of Goode et al. Whether claims 41 and 42 are unpatentable under 35 U.S.C. § 103(a) as obvious over Okada in view of Goode, and in further view of Birks et al. (U.S. 4,847,207).

III. Argument

In view of the Examiner's Reply Brief it is clear that at least three claim elements are not present in the prior art: (1) "a disengagement zone, comprising a hydrocarbon monomer having a water content and undissolved water entrained with the hydrocarbon;" (2) "a head space in the cavity above the bed which allows liquid water to fall out of the hydrocarbon stream;" and (3) "a second vessel coupled to the inlet, wherein the second vessel includes a mono-unsaturated alkene or conjugated diene." The Examiner's response is that the law does not require him to consider these limitations.

The Examiner argues that the element of water should be considered to be the article worked upon by the apparatus and thus does not need to be considered under the law. Applicants have cited two cases from the CCPA and Federal Circuit that specifically treat the element of water used in an apparatus as an element of the claims, and not merely an article worked upon. The Examiner cites to no authority to support his position that water is the article worked upon. Therefore, the preponderance of the evidence weighs heavily in favor of Applicants on this issue.

Furthermore, aside from the fact that water should be considered an element of the claim, Applicants also assert that the general rules relied upon by the Examiner to justify ignoring the limitations of the claims are being applied much too broadly and improperly in this case.

The Examiner cites generally to just one case, *In re Thibault*, and more broadly cites to MPEP § 2114 and § 2115 as supporting his position that claim elements that are either articles to be worked upon or process limitations are not entitled to consideration.

Applicants have distinguished *In re Thibault* and other cases from the current case and explained why the broad language used in *In re Thibault* should not apply in the present case. The Examiner has not presented any evidence or reasoning against these arguments.

Furthermore, Applicants have presented numerous other cases that conflict with a broad reading of *In re Thibault* and the cases cited in MPEP § 2114 and § 2115. These cases require that each element of a claim must be addressed and shown to be in the prior art.

Essentially, the rubrics of “article worked upon” and “process limitations” are another way of objecting to functional limitations in apparatus claims. Both an article worked upon and a process limitation relate to a function of what the apparatus does. As evidence on how the conflict between the Examiner’s cited law and Applicant’s cited law should be resolved, Applicants presented a passage from Chisum, the most widely regarded treatise on patent law, that addresses the cases that condemn claims that include functional language, and explains the better rule held today is that such language is acceptable and proper except when clarity or undue breadth is involved. Chisum cites to two cases for support of this statement. Though stated in the Appeal Brief, the quote is reprinted here for convenience:

A number of decisions condemn patent claims for use of “functional” language, that is, language describing an invention in terms of what it accomplishes rather than in terms of what it is. Functional language is objectionable when it causes a claim to (1) cover more than the inventor has invented and disclosed in the specification or (2) define the invention in a vague and ambiguous manner. Under the better view today, functional language in claims is not objectionable per se so long as it avoids these problems of undue breadth and vagueness.

CHISUM, DONALD S., CHISUM ON PATENTS § 8.04 (Matthew Bender Company, Inc.) (2007) citing *In re Swinehart*, 439 F.2d 210, 169 USPQ 226 (CCPA 1971) and *Home Shopping Network, Inc. v. Coupco, Inc.*, 1998 U.S. Dist. LEXIS 2111 (S.D. N.Y. 1998).

Accordingly, even if the claims are determined to have a functional nature, the preponderance of the evidence again weighs in Applicants favor on the issue that the current claim terms are proper and should be considered for patentability.

Finally, Applicants respectfully disagree that Okada discloses a head space that has the ability to allow liquid water to fall out of a fluid stream. The specification at page 5, line 25-27 discloses that a certain height for the head space or disengagement zone is necessary for the liquid water or entrained water to fall out or separate from the hydrocarbon. There is no evidence that Fig. 1 of Okada discloses a head space or disengagement zone of sufficient height to allow liquid water to fall out of a fluid stream.

In conclusion, Applicants respectfully submit that the preponderance of the evidence is in favor of the patentability of the claims, and allowance of the claims is requested.

Respectfully submitted,

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By: (Signature)

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